

# UNITED STATES PATENT OFFICE.

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## TIME-PIECE.

SPECIFICATION forming part of Letters Patent No. 402,972, dated May 7, 1889.

Application filed August 25, 1888. Serial No. 283,758. (No model.) Patented in France April 19, 1888, No. 190,092.

### *To all whom it may concern:*

Be it known that I, HUGUES RIME, of Paris, France, have invented certain new and useful Improvements in Watches, (for which I have obtained Letters Patent in France, No. 190,092, dated April 19, 1888,) of which the following is a specification.

My invention has for its object a watch which I call "mysterious," because its movement is invisible and because the body of the watch is exclusively composed of transparent glasses, between which are arranged the hands, which, as in ordinary watches, indicate the hours and minutes.

The fundamental organ of my watch consists in a transparent circular glass which turns between the usual glasses under the action of a watch mechanism located in the pendant of the watch or altogether in some other place exterior to the watch-frame. The central glass makes a complete rotation in one hour, and its arbor carries the minute-hand. A very small train of gear-wheels hidden behind the central portions of the hands conveys motion from the axis of the minute-hand to the arbor of the hour-hand.

Having thus disclosed the principle of the construction of my mysterious watch, I will now describe it, referring to the annexed drawings, in which—

Figure 1 is a view of the rear of the watch, the exterior glass and the plate which closes the watch mechanism in the pendant being open. Fig. 2 is a side view of the same. Figs. 3 and 4 are front and sectional views, respectively, on a larger scale, of the watch mechanism; and Fig. 5 is a view showing a different location of the watch mechanism.

The driving or operating movement X of the watch presents no special novelty in its construction except that it is of such size as will permit it to be placed in the pendant F. A hinged plate, *a*, constitutes the cover of the box which incloses the movement.

The power from the movement is transmitted by a large intermediate wheel, E, which, as usual, completes a revolution in one hour. Its movement is transmitted to the wheel B by the intermediate pinion, *b*, which

meshes with the large intermediate wheel, E, and by the wheel A, which meshes with wheel B. The number of teeth on these wheels and pinions are so arranged that the wheel B makes a revolution in one hour. This wheel B is composed of a circular transparent glass, and carries on its periphery a metallic ring, *c*, in which are formed the intermeshing teeth. This metallic ring is concealed by the watch-rim. The arbor of the glass wheel carries the minute-hand *d*, and the concentric arbor or sleeve of the hour-hand is rotated through the train of gear *f*, *g*, *h*, and *i*, in the usual manner, which train has no other peculiarity except that it is of such small size as to be concealed behind the centers of the hands. This mechanism is mounted between the transparent glasses *d d*, and the lids of the watch-body are also of glass, so that a transparent watch is formed, through which the hands may be seen apparently turning without operating mechanism.

The operating mechanism can be placed in any other position on the exterior of the watch-case—for example, at the bottom, as shown in Fig. 5, or on the side.

I do not limit myself to the particular features of construction of my watch, since I may modify them in many ways without departing from my invention, and I reserve the right of making mysterious watches of all dimensions, of any convenient materials, and of all varieties.

I can especially modify the means for communicating motion to the interior rotating glass wheel by utilizing any exterior motor communicating therewith by any other means of transmitting motion, such as a chain or endless cord.

I claim as my invention—

1. A watch having the body or case composed of transparent materials, the hands of said watch and the operating movement thereof exterior to the watch body or case, in combination with a transparent wheel communicating motion from said operating movement to said hands, substantially as set forth.

2. A watch having its body or case com-